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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/730,609	12/07/2000	Tadayuki Ito	H9876.0059/P059	9248

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DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP
1177 AVENUE OF THE AMERICAS (6TH AVE)
NEW YORK, NY 10036-2417

EXAMINER

WU, JINGGE

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 11/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/730,609	Applicant(s) ITO, TADAYUKI	
	Examiner Jingge Wu	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-11,14-16 and 18-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 8-10 and 18-20 is/are allowed.
- 6) ☐ Claim(s) 1, 4-7, 11, 14-16 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

Applicants' response to the last Office Action, filed June 28, 2004 has been entered and made of record.

The rejection of claims 2-3, 12-13, 17 are rendered moot by applicant's cancellation of those claims.

Applicants' amendment has required new grounds of rejection. New grounds rejection are therefore presented in the Office Action.

Applicant's arguments with respect to claims 1 and 11 have been fully considered but are moot in view of the new ground(s) of rejection.

Claim Objections

Claim 21 is objected to because of the following informalities: claim 21 depends on claim 17 that is cancelled. Appropriate correction is required.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). In claims 1 and 11, "a first number of texels along said first dimension and a second number of texes along said second dimension in a texture comprising texels read from a texture memory" is not properly supported by the the specification because the texels in filter domain are 2D texels, thus, they have two coordinates (two dimensions) to defined them. Therefore, for any texel, one must define how it is along one dimension that does not describe in the specification. Correction of the following is required.

Claim Rejections - 35 USC § 112

Art Unit: 2623

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 11 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for texels defined in two dimensional space, does not reasonably provide enablement for any texels along particular dimension in the filter domain. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to conceive the invention commensurate in scope with these claims. Claims 4-7 and 14-16 and 21.

Claims 6, 11 and 12 recites the limitation "said first and second numbers" in last paragraph of claims. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4, 6, 11, 14, 16, 20 are rejected under 35 U.S.C. 102(e) as being anticipated by JP 11250279 to Lee (a reference of PTO 1449, also US corresponding patent, US 6097397).

As to claim 1 (under best understanding of examiner), Charles discloses an image processing method comprising:

obtaining, for a pixel, a set of texture coordinates comprising a first texture coordinates in a first dimension (fig. 1a, S dimension), and a second texture coordinates in a second dimension (fig. 1a, T dimension) and a set of LOD values comprising a first LOD value in said first dimension (S_i) and a second LOD value in said second dimension (T_j) (fig. 1a, col. 5 lines 10-17);

determining based on the LOD values a filtering domain of texels (footprint 12a) read from a texture memory (fig. 1b and 2c, col. 5 lines 37-52);

calculating a texture color as a weighted average of color values from texels in said filtering domain (col. 6 lines 40-52, col. 8 line 42-col. 9 line 20 and col. 10 lines 8-31);

and pasting the texture color to said pixel (fig. 2 43-45, col. 8 lines 25-41),

wherein the first and second numbers of coordinates of the first and second numbers of texels related are respectively related to said first and second LOD values (fig. 1b and 2c, col. 5 lines 37-65)

As to claim 4, Lee further discloses an predetermined offset value is added to the first and second LOD values (col. 5 lines 25-36, S_i and T_i are the LOD values).

As to claim 6 (under the best understanding of examiner), Lee further discloses at least one of said first and second number of texels are also related to a state of flag (4 bit indicator)(col. 7 lines 13-28).

As to claims 11, 14, and 16, claims 11, 14, 16 are the corresponding apparatus claims to claims 1, 4, 6 respectively. The discussion are addressed with regard to claims 1, 4, 6.

As to claim 21 (assuming depend from claim 11), Lee further discloses:
a circuit for creating an address for reading a texel from a texture RAM (fig. 3, 73, 80-1-80-4) based on texture coordinates and modified LOD values (fig. 3); and
a circuit for sampling texels read from the RAM (fig. 3, 80-1—80-4, 82, and 84),
wherein the second circuit entered the sampled and rearranges the corresponding texels based on a flag indicative how many texel (fig. 2e, sub-texels) are to be used to acquire the texture color (col. 8 line 42-col. 9 line 20).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee and US 6373496 to Iourcha (Iourcha1).

As to claims 5 and 15, Lee discloses selecting filtering domain (col. 5 lines 37-52) but did not explicitly mention selecting mipmap.

lourch1, in an analogous environment, discloses selecting one of LOD values first based on a parameter (D) (col. 2 lines 38-65 col. 5 lines 5-19) designating a method of selection of one midmap form a plurality of mipmaps stored in the memory (col. 5 lines 5-19), and selecting a mipmap according to one of selected LOD values (col. 2 lines 38-65, note that selecting one LOD (u, v) first and calculating the D, which is used to select appropriate midmap corresponding LOD values selected).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the scheme of lourcha1 in the method of Lee in order to speed up the texturing process (lourcha1, abstract).

As to claim 7, lourcha1 further discloses designating a mipmap corresponding the parameter, which at least one of LOD values is filtered (col. 5 lines 5-19).

Allowable Subject Matter

Claims 8 and 18 are allowed.

Claims 9-10, and 19-20 depend from claims 8 and 18 , therefore, are objected.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications should be directed to Jingge Wu whose telephone number is (703) 308-9588. He can normally be reached Monday through Thursday from 8:00 am to 5:30 pm. The examiner can be also reached on second alternate Fridays.

Any inquiry of a general nature or relating to the status of this application should be directed to TC customer service whose telephone number is (703) 306-0377.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Amelia Au, can be reached at (703) 308-6604.

The Working Group Fax number is (703) 872-9314.

Jingge Wu

Primary Patent Examiner

